

# ABSTRACT OF THE DISCLOSURE

A multi-layer circuit board includes ground and power metal layers, signal wiring layers, and a plurality of insulating substrates disposed sequentially one above the other. Each adjacent pair of the metal layers and the signal wiring layers are spaced apart by one of the insulating substrates. At least one of the signal wiring layers is suitable for high-speed low-impedance signal transmission, and is separated from the adjacent one of the metal layers by an adjacent one of the insulating substrates, which is made from a first insulator material having a first dielectric coefficient. The other ones of the insulating substrates, that are not adjacent to the high-speed low-impedance signal wiring layers, are made of a second insulator material having a second dielectric coefficient lower than the first dielectric coefficient.

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